ANISIMOV, I.

Truck for transporting bottled gas. Zhil.-kom. khoz. 8 no.12:22 '58. (MIRA 13:1)

1.Direktor tresta "Kaliningorgaz."
(Liquefied petroleum gas--Transportation)

ANISIMOV, I.

Do not lower the tempo or quality of work. Zhil.-kom.khoz. 4 no.2: 6-8 '54. (MLRA 7:5)

1. Upravlyayushchiy Kalininskim trestom "Vodokanal".
(Kalinin--Water supply) (Water supply--Kalinin)

ARONOVICH, V.V. (Moskva); ANISIMOV, I.A. (Moskva); LYUDMIRSKIY, M.I. (Moskva); PATUSHINSKAYA, R.S. (Moskva)

Quality control of some processes in the chemical industries.
Avtom.i telem. 21 no.6:821-832 Je '60. (MIRA 13:7)
(Automatic control) (Chemical engineering)

ANISIMOV, I.A.

Intersections in city triangulation. Geod.i kart. no.6:53-56 Je '61. (MIRA 14:6)
(Triangulation)

ANISIMOV, I.A.; PINYAGIN, N.B.; RYKOVA, S.S.

Role played by the petroleum refining industry in the creation of major industrial chemical complexes. Khim.i tekh.topl.i masel 8 no.8:30-31 Ag '63. (MIRA 16:9)
(Petroleum--Refining) (Chemical industries)

ANISIMOV, I.I.; SHENYANSKIY, K.A.; RUDIK, G.T.

Specific prophylaxis of brucellosis in cattle on collective and state farms in Staline Province. Veterinariia 32 no.5: 25-29 My '55. (MLRA 8:7)

1.Nachal'nik vetotdela Stalinskoy oblasti (for Anisimov).
2.Direktor mezhsovkhoznoy laboratorii (for Shenyanskiy).
3.Starshiy vetvrach sovkhoza imeni Oktyabr'skoy revolyutsii (for Rudik).
(STALINO PROVINCE--BRUCELLOSIS IN CATTLE--PREVENTIVE INOCULATION)

ARZUMANYAN, A.A., akademik; BERG, A.I., akademik; ZHUKOV, Ye.M., akademik; SEMENOV, N.N., akademik; VINOGRADOV, V.V., akademik; FRANTSEV, Yu.P.; SHCHERBAKOV, D.I., akademik; ANISIMOV, I.I.; GATOVSKIY, L.M.; IOVCHUK, M.T.; FEDOSEYEV, P.N., akademik; ROMASHKIN, P.S.; KONSTANTINOV, F.V.; MITIN, M.B., akademik; YELYUTIN, V.P.; PLOTNIKOV, K.N.; PRUDENSKIY, G.A.; YUDIN, P.F., akademik; RYBAKOV, B.A., akademik; KONSTANTINOV, B.P., akademik; KHVOSTOV, V.M.; KEDROV, B.M.; MARKOV, A.A.; BAISHEV, S.B., akademik; ALEKSEYEV, M.N., prof.; SKAZKIN, S.D., akademik; ALEKSANDROV, A.D.; POSPELOV, P.N., akademik

Discussion of L.F. Il'ichev's rreport. Vest. AN SSSR 32 no.12:19-50 D '62. (MIRA 15:12)

1. Chleny-korrespondenty AN SSSR (for Aleksandrov, Frantsev, Anisimov, Gatovskiy, Iovchuk, Romashkin, Konstantinov, Yelyutin, Plotnikov, Prudenskiy, Khvostov, Kedrov, Markov). 2. AN Kazakhskoy SSR (for Baishev).

(Research)

ANISIMOV, I. N.

Drozdov, A. D. and Anisimov, I. N. "Calculations of excitation of synchronous compensators with electronic voltage regulators," In index: 2nd author - Anisimov, N. I. Trudy Novocherkas. politekhn. in-ta im. Ordzhonikidze, Vol. XVIII, 1948, p. 17-23

SO: U-3[illegible], 16 June 53, (Letopis 'Zhurnal 'nykh Statey, No. 5, 1949).

ANISIMOV, I.N., zasluzhennyy vetvrach USSR.

Use of antibiotics in poultry farming. Ptitsevodstvo 8 no.6:33-35 Je '58. (MIRA 11:6)

1.Nachal'nik veterinarnogo otdela Stalinskogo oblsel'khozupravleniya.
(Stalino Province-- Poultry) (Antibiotics)

ANISIMOV, I.N., zasluzhennyy vetvrach USSR.

Results of warble fly control in Stalino Province. Veterinariia 35 no.3:67-69 Mr '58. (MIRA 11:3)

1. Nachal'nik vetotdela oblsel'khozupravleniya Stalinskoy oblasti, USSR.

(Stalino Province--Warble flies)

ANISIMOV, I.N.

Diseases of the respiratory organs in young poultry.
Veterinariia 36 no.10:23-25 O '59. (MIRA 13:1)

1. Nachal'nik veterinarnogo otdela Stalinskogo oblsel'khozupravleniya.
(Poultry--Diseases and pests)

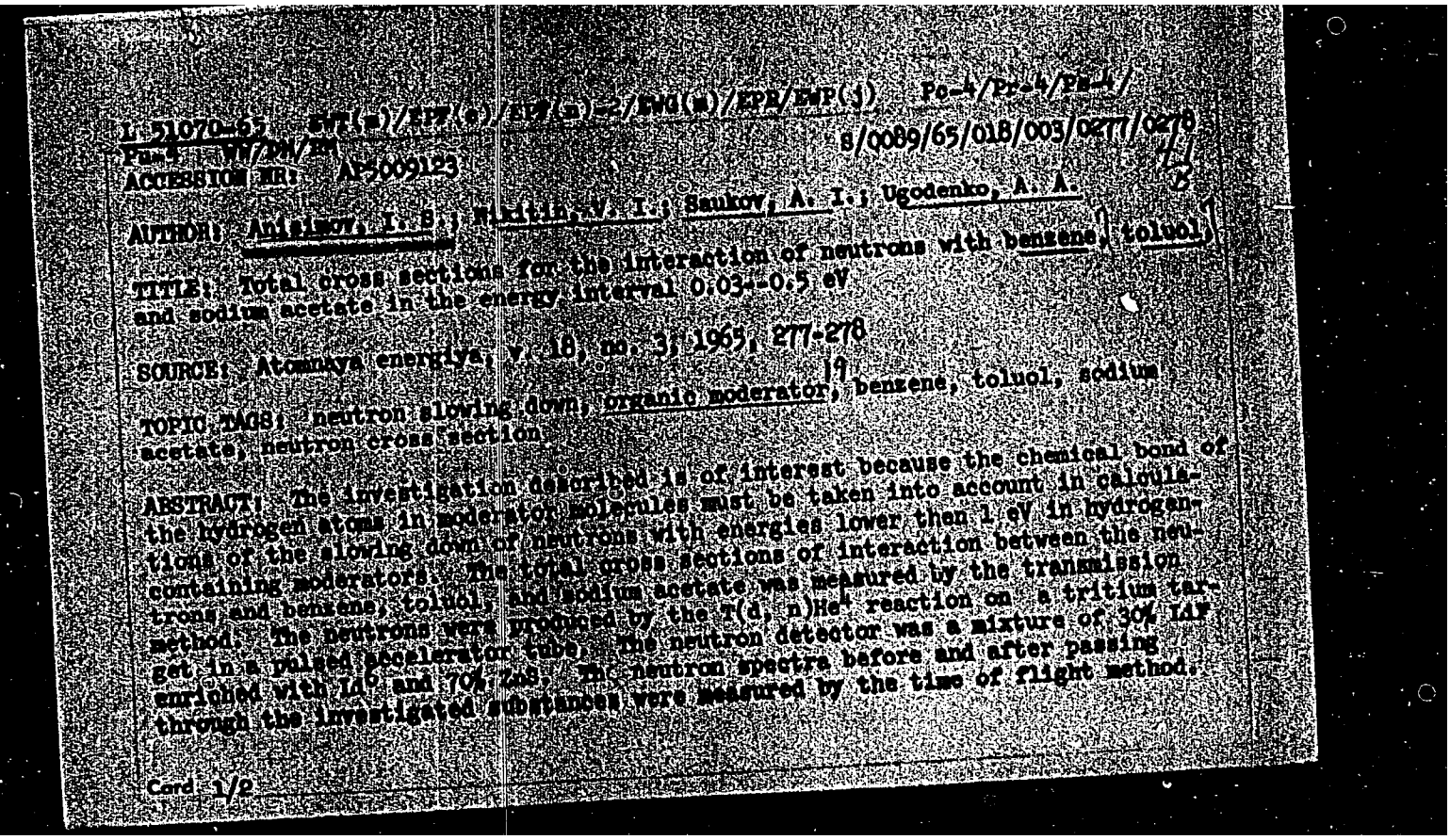
ANISIMOV, I. N. Head of the Veterinary Department of the Stalinsk Oblast' Agricultural Administration, Honored Veterinary Surgeon of the Ukrainian SSR.

Effective means (sources) for the rise of the productiveness in animal husbandry /use of feed antibiotics/, Veterinariya, Vol. 37, No. 11, p. 27, 1960.

ANISIMOV, I.N., zasluzhennyy veterinarnyy vrach UkrSSR

Possibilities for the increase of productivity in animal husbandry. Veterinariia 37 no.11:27-30 N '60. (MIRA 16:2)

1. Nachal'nik veterinarnogo otdela Stalinskogo oblastnogo sel'skokhozyaystvennogo upravleniya.
(Donetsk Province—Stock and stockbreeding)



L 21070-65 EWT(m)/EPF(c)/EPR/EWP(m)-2/EWG(m)/EPR/EWP(j) Pc-4/Pr-4/Ps-4/
Pm-4 RM/DM/RM S/0089/65/018/003/0277/0278
ACCESSION NR: AP5009123 B

AUTHOR: Anisimov, I. S.; Nikitin, V. I.; Saukov, A. I.; Ugodenko, A. A.

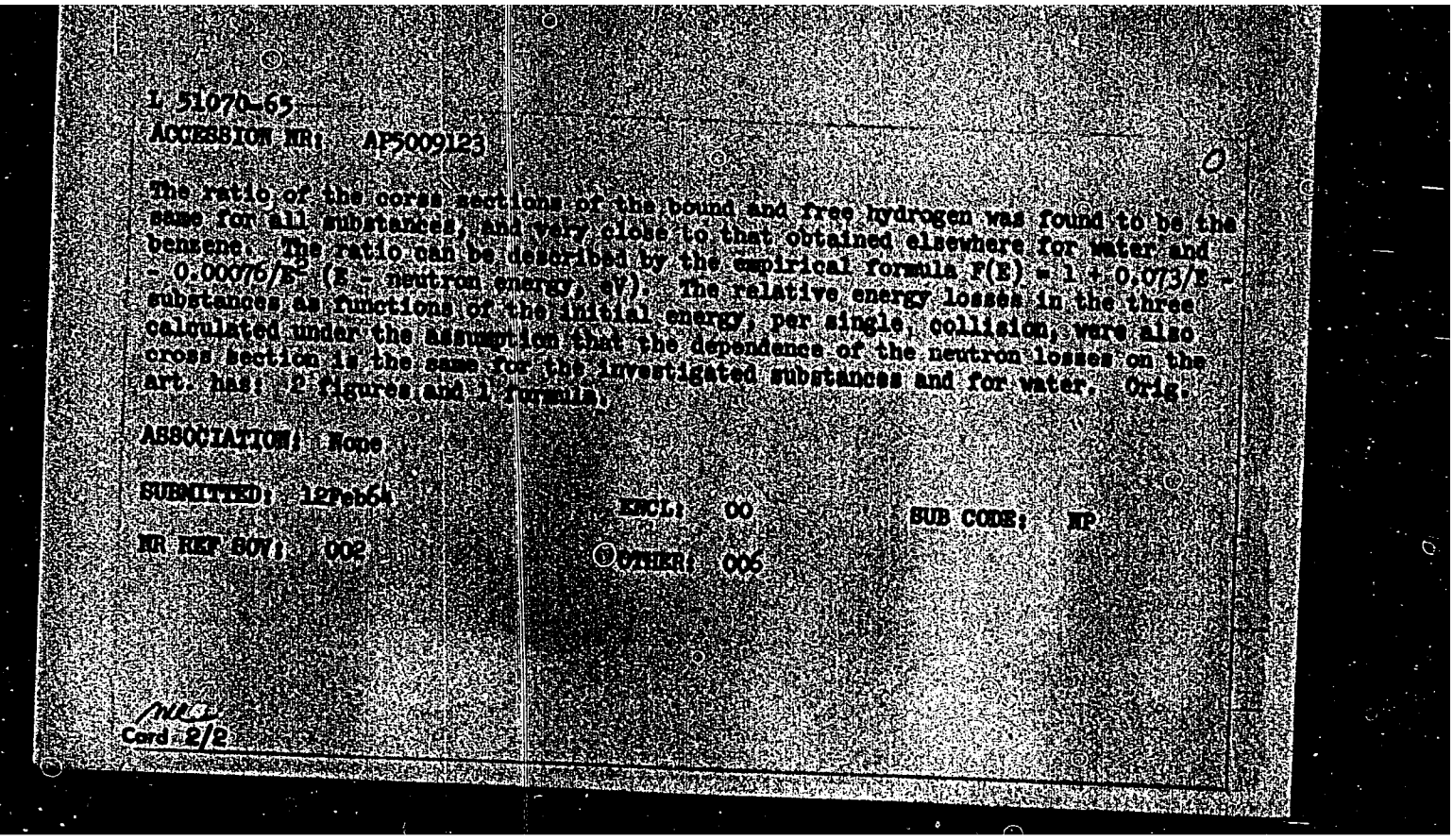
TITLE: Total cross sections for the interaction of neutrons with benzene, toluol, and sodium acetate in the energy interval 0.03--0.5 eV

SOURCE: Atomnaya energiya, v. 18, no. 3, 1965, 277-278

TOPIC TAGS: neutron slowing down, organic moderator, benzene, toluol, sodium acetate, neutron cross section

ABSTRACT: The investigation described is of interest because the chemical bond of the hydrogen atoms in moderator molecules must be taken into account in calculations of the slowing down of neutrons with energies lower than 1 eV in hydrogen-containing moderators. The total cross sections of interaction between the neutrons and benzene, toluol, and sodium acetate was measured by the transmission method. The neutrons were produced by the T(d, n)He^4 reaction on a tritium target in a pulsed accelerator tube. The neutron detector was a mixture of 30% LiF enriched with Li^6 and 70% ZnS. The neutron spectra before and after passing through the investigated substances were measured by the time of flight method.

Card 1/2



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ACCESSION NR: AP5009123

The ratio of the cross sections of the bound and free hydrogen was found to be the same for all substances, and very close to that obtained elsewhere for water and benzene. The ratio can be described by the empirical formula $F(E) = 1 + 0.07\beta - 0.0007\beta^2$ (E - neutron energy, eV). The relative energy losses in the three substances as functions of the initial energy, per single collision, were also calculated under the assumption that the dependence of the neutron losses on the cross section is the same for the investigated substances and for water. Orig. art. has: 2 figures and 1 formula.

ASSOCIATION: None

SUBMITTED: 12Feb64 ENCL: 00 SUB CODE: NP

NR REF SOV: 002 OTHER: 006

Card 2/2

ANISIMOV, I.T.

ANISIMOV, I.T., podpolkovnik meditsinskoy sluzhby

Prevention of suppuration in surgery of infected tissue. Voen.-med.zhur. no.7:58-61 Jl '57. (MIRA 11:1)
(WOUNDS AND INJURIES, surg.
prev. of suppuration)

ANISIMOV, I.T.

ANISIMOV, I.T.

Perforating gastric ulcer complicated by a biliary fistula which was closed with a paraffin seal. Sov.med. 21 Supplement:21 '57.
(MIRA 11:2)
(PEPTIC ULCER)
(FISTULA)
(GALL BLADDER--DISEASES)

ANISIMOV, I.T.

Prevention and treatment of acute purulent peritonitis. Sov.med. 22 no.7:114-117 Jl'58 (MIRA 11:10)
(PERITONITIS,
purulent postop., prev. & ther. (Rus))

ANISIMOV, I. V.

ANISIMOV, I. V.: "Material on the morphological investigation of peripheral blood bone-marrow punctate of cattle under normal and anemic conditions". Troitsk, 1955. Min Higher Education USSR. Kazan' State Veterinary Inst imeni N. E. Bauman. (Dissertations for the degree of Candidate of Veterinary Science.)

SO: Knizhnaya Letopis' No. 50 10 December 1955. Moscow.

ANISIMOV, I.V.; KRIVSUNOV, V.N.

Characteristics of the transient conditions of plate towers.
Khim. i tekh. topl. i masel 10 no.3:45-50 Mr '65.
(MIRA 18:11)

1. Moskovskiy institut khimicheskogo mashinostroyeniya i Severodonetskiy filial Opytno-konstruktorskogo byuro avtomatiki.

ANISIMOV, I. V., Engr.

"Automatization of the Production of Industrial Synthetic Acetic Acid From Acetaldehyde." Cand Tech Sci, Moscow Inst of Chemical Machine Building, 16 Sep 54. (VM, 6 Sep 54)

SO: Sum 432, 2? Mar 55

ANISIMOV, I.V.

USSR/Chemistry - Acetic acid production FD-2640

Card 1/1 Pub. 50-5/18

Author : Anisimov, I. V.

Title : Automatization of the production of acetic acid from acetaldehyde

Periodical : Khim. prom. No 3, 145-150, Apr-May 1955

Abstract : Outlines automatic control procedures used in the production of acetic acid by the liquid phase oxidation of acetaldehyde in the presence of manganese acetate. Five figures.

ANISIMOV, I. V.

USSR/Chemistry - Chemical engineering, Control instruments FD-3363

Card 1/1 Pub. 50 - 7/20

Author : Anisimov, I. V.

Title : Determination of the dynamic characteristics of automatic control systems by means of industrial instruments and controllers

Periodical : Khim. prom. No 7, 408-414, Oct-Nov 1955

Abstract : Developed a method of determining the characteristics of automatic control systems applied in the chemical industry by using industrial recorders and controllers which record data on a magnified scale. Propose a method of introducing disturbances into the input in such a manner that the fluctuations of the parameter being regulated will not exceed the set limits. The calculation of the amplitude-phase characteristics according to "dispersal curves" [error curves] yielded values which agreed well with those calculated from frequency curves. Ten references, all USSR, all since 1940. Two figures, 6 graphs, 3 tables.

Institution : --

Submitted : --

ANISIMOV, I.V., kandidat tekhnicheskikh nauk.

Experimental determination of the dynamic characteristics of industrial pneumatic regulators. Khim.prom.no.8:476-482 D '56. (MLRA 10:1)
(Thermostat) (Pneumatic control)

ANISIMOV, Igor' Vasil'yevich, kandidat tekhnicheskikh nauk; GORKOVA, A.A., inzhener, vedushchiy redaktor; KHLEBNIKOVA, L.A., tekhnicheskiy redaktor

[Automatic control in rectification processes] Avtomaticheskoe regulirovanie protsessa rektifikatsii. Moskva, Gos.nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry, 1957. 102 p. (MLRA 10:7)
(Distillation) (Automatic control)

ANISIMOV, I.V., kand.tekhn.nauk.

Considering the automatic regulation of oxidation towers as standard control type in chemistry industries. Priborostroenie no.9:4-8 S '57. (MIRA 10:10)
(Automatic control) (Oxidation)

28 (5)

AUTHOR: Anisimov, I. V.

S/064/59/000/07/019/035
B005/B123

TITLE: Methods of Optimum Adjustment of Regulators Based on the Dynamic Characteristics of the System to Be Regulated as Obtained by Experiments

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 7, pp 612 - 619 (USSR)

ABSTRACT: In the paper by Ye. G. Dudnikov (Ref 1), a method is described for computing the adjustment of regulators from dynamic characteristics of the system that were obtained experimentally. In the present paper it is shown that this method can also be used for computing optimum adjustments of serially manufactured automatic regulators in the chemical industry. Besides, correction factors for the changes in working conditions of the system are given. Moreover, the author worked out a procedure by which the adjustment of the regulator can be selected according to the conditions of the changing load of the system. The author's calculations are given in the paper. Table 1 shows the values of two power exponents that were necessary for the calculation. As an example the com-

Card 1/3

Methods of Optimum Adjustment of Regulators Based on the Dynamic Characteristics of the System to Be Regulated as Obtained by Experiments

S/064/59/000/07/019/035
B005/B123

putation of the optimum adjustment for a manometric temperature regulator, type 04-TG-610,[27] is given, which is used in the oxidation column in the production of acetic acid. This regulation system is reproduced schematically and accurately described. Table 2 gives the data necessary for the computation obtained by experiment, tables 3 to 5 show intermediate results obtained in the course of calculations. A method was suggested by V. V. Solodovnikov (Refs 4, 5) for drawing a diagram of the anticipated transition process of regulation with an optimum adjustment of the regulator. In the present paper the following industrial standard measuring apparatus with pneumatic transmission of indications are recommended: Float-manometer (consumption-meter, level-meter, extensometer), type DPP-280,[28] spiral spring-manometer, type MGP-270,[28] bellows-sealed vacuometer, type VSP-270,[28] and a ring balance with universal pneumatic transmitter, type UPDKV.[28] In a special section of the paper the preparatory work for adjusting and determining the correction coefficients during the calculation of optimum adjustment is discussed in detail. There are 9 figures, 5 tables,

Card 2/3

Methods of Optimum Adjustment of Regulators Based on the Dynamic Characteristics of the System to Be Regulated as Obtained by Experiments

S/064/59/000/07/019/035
B005/B123

and 5 Soviet references.

Card 3/3

ANISIMOV, Igor' Vasil'yevich; GOR'KOVA, A.A., ved. red.; POLOSINA, A.S., tekhn. red.

[Automatic control of rectification] Avtomaticheskoe regulirovanie protsessa rektifikatsii. 2. izd., dop. Moskva, Gos.nauchno-tekhn. izd-vo neft.i gorno-toplivnoi lit-ry, 1961. 179 p. (MIRA 14:12)
(Distillation, Fractional) (Automatic control)

ANISIMOV, I.V.; KRIVSUNOV, V.N.

Mathematical description of the static characteristics of a tray rectification column. Khim.prom. no.9:572-575 Ag '62. (MIRA 15:9)

(Plate towers)

KRIVSUNOV, V. N.; ANISIMOV, I. V.

Static characteristics of plate rectification columns. Khim. prom. no.3:219-227 Mr '63. (MIRA 16:4)

(Plate towers)

ANISIMOV, I.V.; SMOL'NIKOV, P.V.

Development of the combined invariant system for the control of rectification. Khim.prom. no.12:895-902 D '63. (MIRA 17:3)

ANISIMOV, I.V.; DOROBANTU, L.

Use of electron analog computers for modeling the process of the rectification of binary mixtures. Khim. prom. no.6:453-458 Je '64. (MIRA 18:7)

ANISIMOV, I.V.; [illegible], Yu.I., [illegible], A.G.

Electronic digital computer calculation of the optimum construction parameters of the plate rectification columns for the separation of binary mixtures. Khim. prom. 40 no.10:776-782 O '64.
(MIRA 9:3)

ANISIMOV, I.V.

Mandrel for turning grooves. Mashinostroitel' no5:18 My '65.
(MIRA 18:5)

ANDREYEV, V.S.; ANISIMOV, I.V.; SOFIYEVA, Yu.N.

Statistical methods for the determination of the frequency characteristics of rectification columns. Khim. prom. 41 no.1: 49-54 Ja '65. (MIRA 18:3)

ANISIMOV, I.Ye. (Moscow).

Strapless folding apparatus for newspaper rotary presses. Poligr. proiz. no.5:14-15 My '53. (MLRA 6:6)
(Printing press)

ANISIMOV, K.

This demands an urgent decision. Prom.koop. 14 no.8:28 Ag '60. (MIRA 13:8)

1. Predsedatel' pravleniya arteli invalidov "Kartonazn," Leningrad.
(Leningrad--Physically handicapped--Rehabilitation)

ANISIMOV, Kh.; ADMAYKIN, P.

Our bearers of decorations. Prom.koop. 14 no.6:27 Je '60. (MIRA 13:7)

1. Starshiy inspektor orgrevizionnogo otdela promsoveta Dagestanskoy ASSR, g. Makhachkala (for Anisimov).
2. Nachal'nik otdela orgmassovoy raboty i kadrov oblpromsoveta, g. Irkutsk (for Admaykin).
(Decorations of honor)

KOTTEL', Yu.; METKIN, A.; ANISIMOV, K.

This is what conveyers contribute. Prom.koop. 14 no.7:6-7 Jl '60. (MIRA 13:8)

1. Tekhnoruk arteli "Kul'tkhim," Kiyev(for Kottel').
2. Tekhnoruk arteli invalidov "Kollektivnyy trud," g.Kimry, Kalininskoy oblasti (for Metkin). 3. Predsedatel' pravleniya arteli invalidov "Kartonazh," Leningrad (for Anisimov).
(Kiev--Pigments) (Kimry--Shoe industry)
(Leningrad--Paper box industry)

ANISIMOV, K.

Electron-tube voltmeter. Radio no.3:53-54 Mr '61. (MIRA 14:8)
(Electron-tube voltmeter)

ANISIMOV, K. (g. Leningrad)

Audio generator. Radio no.5:47-48 My '61. (MIRA 14:7)
(Oscillators, Electric)

ANISIMOV, K. (Leningrad)

Wobbulator. Radio no.5:52-54 My '63. (MIRA 16:5)
(Oscillators, Electron-tube)

ANISIMOV, K. N.

USSR/Chemistry Synthesis

Card : 1/1 Pub. 40 - 5/27

Authors : Anisimov, K. N., and Nesmeyanov, A. N.

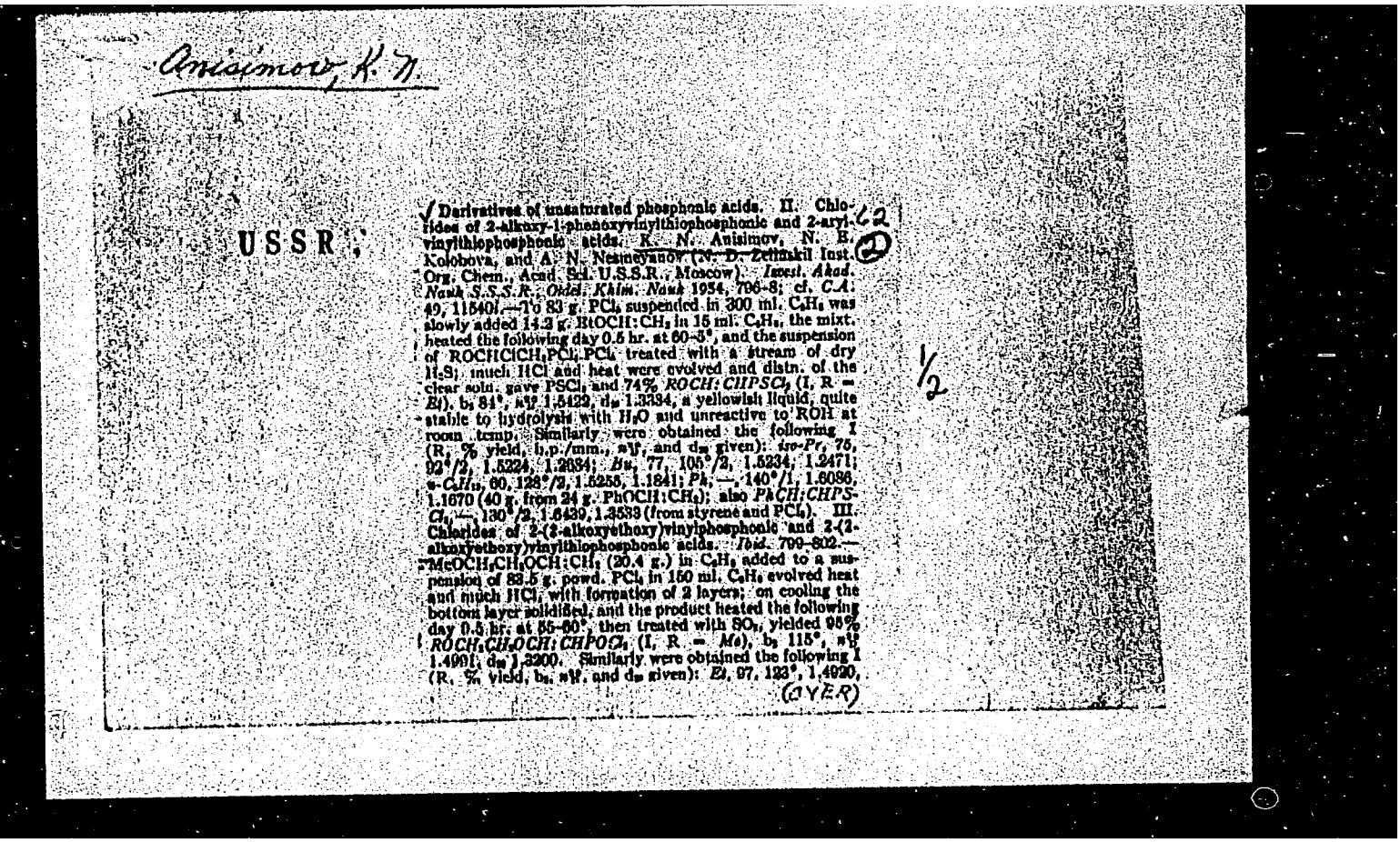
Title : Investigation of phosphinic acid derivatives. Part 1.- Synthesis of beta-alkoxy (phenoxy)-phosphinic acid chlorides

Periodical : Izv. AN SSSR, Otd. khim. nauk 4, 610 - 613, July - August 1954

Abstract : The addition of phosphorpentachloride to alkyl(aryl)vinyl ethers and the chemical properties of the addition products obtained, were investigated. A simple and convenient method for the synthesis of dichloroanhydrides of beta-alkoxy(phenoxy)-vinylphosphinic acids, is described. The effect of carboxylic acids and water on the yield of addition products, is explained. Nine references: 2 USSR; 4 USA and 3 German (1876 - 1948). Table.

Institution : Acad. of Sc. USSR, Institute of Organic Chemistry

Submitted : August 23, 1953



Anisimov, K. N.

USSR

Derivatives of unsaturated phosphonic acids. II. Chlorides of 2-alkoxy-1-phenoxyvinylthiophosphonic and 2-aryl-vinylthiophosphonic acids. K. N. Anisimov, N. E. Kolobova, and A. N. Nesmeyanov (N. D. Zelinskii Inst. Org. Chem., Acad. Sci. U.S.S.R., Moscow). *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1954, 796-8; cf. *C.A.* 49, 11840f.—To 83 g. PCl_5 suspended in 300 ml. C_6H_6 was slowly added 14.2 g. $RtOCH:CH_2$ in 15 ml. C_6H_6, the mixt. heated the following day 0.5 hr. at 60–5°, and the suspension of $ROCHClCH_2PCl_4$ treated with a stream of dry H_2S; much HCl and heat were evolved and distn. of the clear soln. gave $PSCl_3$ and 74% $ROCH:CHPSCl_2$ (I, R = Et), b. 84°, n_D^{20} 1.5422, d_4^{20} 1.3334, a yellowish liquid, quite stable to hydrolysis with H_2O and unreactive to ROH at room temp. Similarly were obtained the following I (R, % yield, b.p./mm., n_D^{20}, and d_4^{20} given): *iso-Pr*, 75, 92°/2, 1.5224, 1.2084; *Bu*, 77, 105°/2, 1.5234, 1.2471; *s-C₅H₁₁*, 60, 128°/2, 1.5255, 1.1841; *Ph*, —, 140°/1, 1.6086, 1.1670 (40 g. from 24 g. $PhOCH:CH_2$); also $PhCH:CHPSCl_2$, —, 130°/2, 1.6439, 1.3533 (from styrene and PCl_5). III. Chlorides of 2-(2-alkoxyethoxy)vinylphosphonic and 2-(2-alkoxyethoxy)vinylthiophosphonic acids. *Ibid.* 799–802.—$MeOCH_2CH_2OCH:CH_2$ (20.4 g.) in C_6H_6 added to a suspension of 83.5 g. powd. PCl_5 in 150 ml. C_6H_6 evolved heat and much HCl, with formation of 2 layers; on cooling the bottom layer solidified, and the product heated the following day 0.5 hr. at 55–60°, then treated with SO_2, yielded 98% $ROCH_2CH_2OCH:CHPOCl_2$ (I, R = Me), b. 115°, n_D^{20} 1.4991; d_4^{20} 1.3200. Similarly were obtained the following I (R, % yield, b., n_D^{20}, and d_4^{20} given): Et, 97, 123°, 1.4920,

(OVER)

C-2

1/2

K. N. Anisimov

1.2881; *Bu*, 90, 142°, 1.4869, 1.2133. Treatment of the intermediate adducts with H_2S instead of SO_2 gave the following $ROCH_2CH_2OCH:CHPSCl_2$: *Me*, 76, 113°, 1.5413, 1.3364; *Et*, 85, 120°, 1.5330, 1.2867; *Bu*, 86, 137°, 1.5100, 1.2210. IV. Chlorides of arylvinylphosphonic acids. K. N. Anisimov. *Ibid.* 303-5.—To 104 g. PCl_5 suspended in 150 ml. C_6H_6 was added 20.2 g. styrene in 50 ml. C_6H_6, and the cryst. adduct treated the following day with SO_2 until HCl evolution ceased and a clear soln. formed; distn. gave 96% $PhCH:CHPOCl_2$, b. 139°, m. 71–2°, slowly attacked by cold H_2O. To 83 g. PCl_5 suspended in C_6H_6 (200 ml.) was added 24 g. indene in 20 ml. C_6H_6, and the suspension dild. the following day with 50 ml. C_6H_6 and heated to 65–70° while dry SO_2 was passed into it, removal of HCl on a steam bath *in vacuo* and distn. of the residue gave 82% 2-indenylphosphonyl dichloride, $C_6H_4.CH_2.C(POCl_2):CH$, b. 133°, m. 73–4°. Similarly 83 g. PCl_5 with 20.4 g. $PhC{:}CH$ gave 87% $PhCCl:CHPOCl_2$, b. 142.5–3.5°, n_D^{25} 1.6175, d_4 1.4675, which is also but slowly attacked by cold H_2O. The above phosphonyl chlorides can also be obtained from the intermediate adducts by treatment with the calcd. amt. of H_2O (the yields are not cited). O. M. Kosolapoff

ANISIMOV, K.N.; KOLOBOVA, N.Ye.; NESMEYANOV, A.N.

Investigation in the field of derivatives of unsaturated phosphinic acids. Report no.3. β-alkoxyethoxyvinylphosphinyl and β-alkoxyethoxyvinylthiophosphinyl chlorides. Izv.AN SSSR Otd.khim. nauk no.5:799-802 S-O '54. (MLRA 8:3)

1. Institut organicheskoy khimii im. N.D.Zelinskogo Akademii nauk SSSR.
(Phosphinic acid) (Chlorides)

ANISIMOV, K.N.

Investigation in the field of derivatives of unsaturated phosphinic acids. Report no.4. Arylvinylphosphinyl chlorides. Izv. AN SSSR Otd.khim. nauk no.5:803-805 S-O '54. (MLRA 8:3)

1. Institut organicheskoy khimii im N.D.Zelinskogo Akademii nauuk SSSR.

(Phosphinic acid) (Chlorides)

ANISIMOV, K. N.

USSR/ Chemistry - Organic chemistry

Card 1/1 Pub. 40 - 7/26

Authors : Anisimov, K. N.; Kolobova, N. Ye.; and Nesmeyanov, A. N.

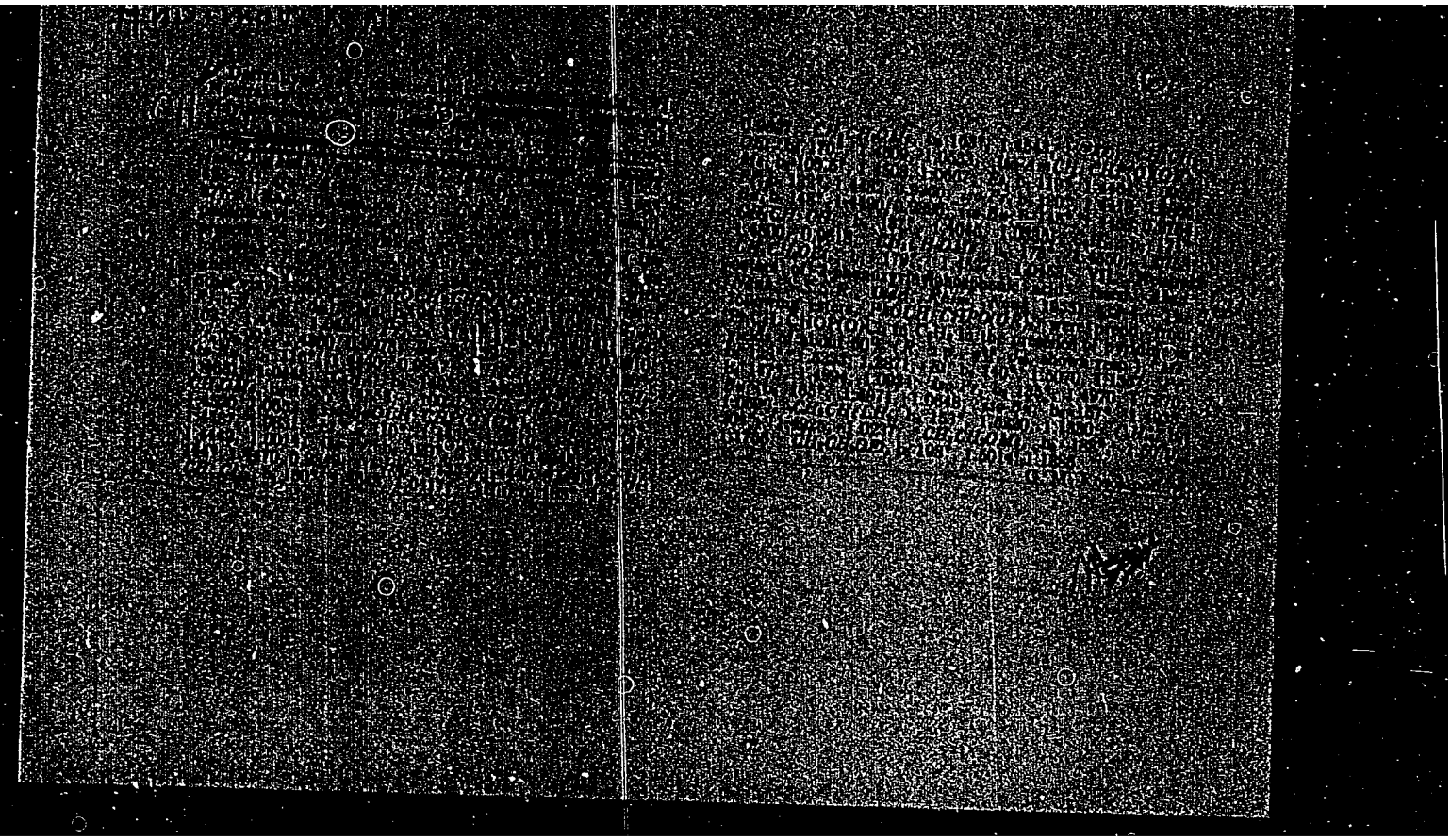
Title : Derivatives of unsaturated phosphinic acids. Part 5. Esters of beta-ethoxyvinylphosphinic, beta-n-propoxyvinylphosphinic, beta-n-butoxyvinylphosphinic and beta-n-hexyloxyvinylphosphinic acids.

Periodical : Izv. AN SSSR. Otd. khim. nauk 2, 240 - 248, Mar-Apr 1955

Abstract : The characteristics of ethoxy, propoxy, butoxy and hexyloxy-vinylphosphinic acid esters obtained during the reaction of alcohols with the dichloro anhydrides of these acids in the presence of pyridine are described. Data are also presented on the synthesis of methyl, ethyl, n-propyl, isopropyl, n-butyl, isobutyl, allyl, n-hexyl, beta-methoxyethyl and beta-ethoxyethyl esters of the above mentioned acids. Thirteen references: 1 Polish and 12 USSR (1917-1954). Tables.

Institution : Acad. of Sc., USSR, Inst. of Organoelemental Compounds

Submitted : June 11, 1954

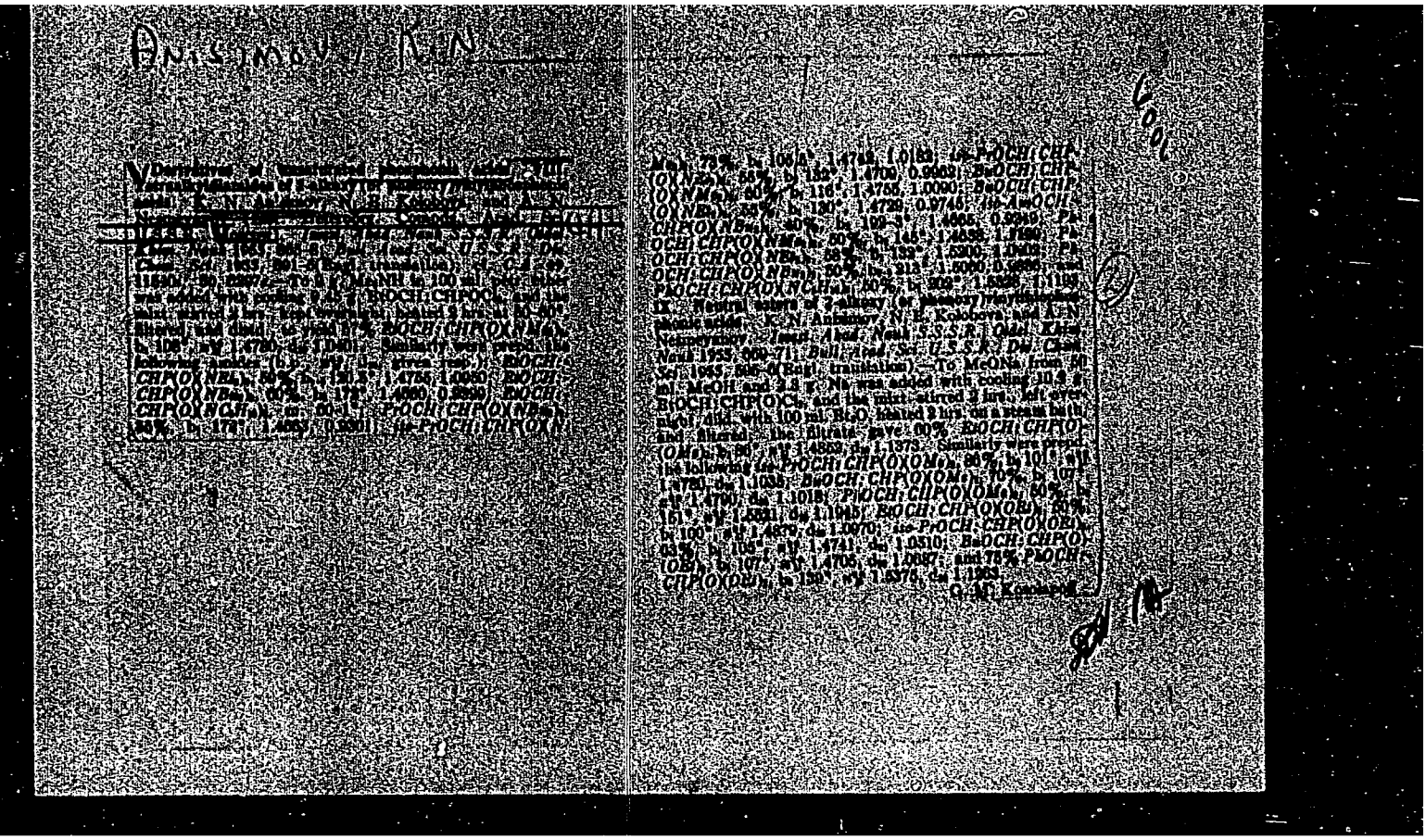


ANISIMOV,K.N.; KOLOBOVA,N.Ye.; NESMEYANOV,A.N.

Research in the field of unsaturated phosphinic acids. Report no.7. Esters of β-phenoxyvinylphosphinic acid. Izv.AN SSSR. Otd.khim.nauk no.3:432-434 My-Je '55. (MLRA 8:9)

1. Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR.

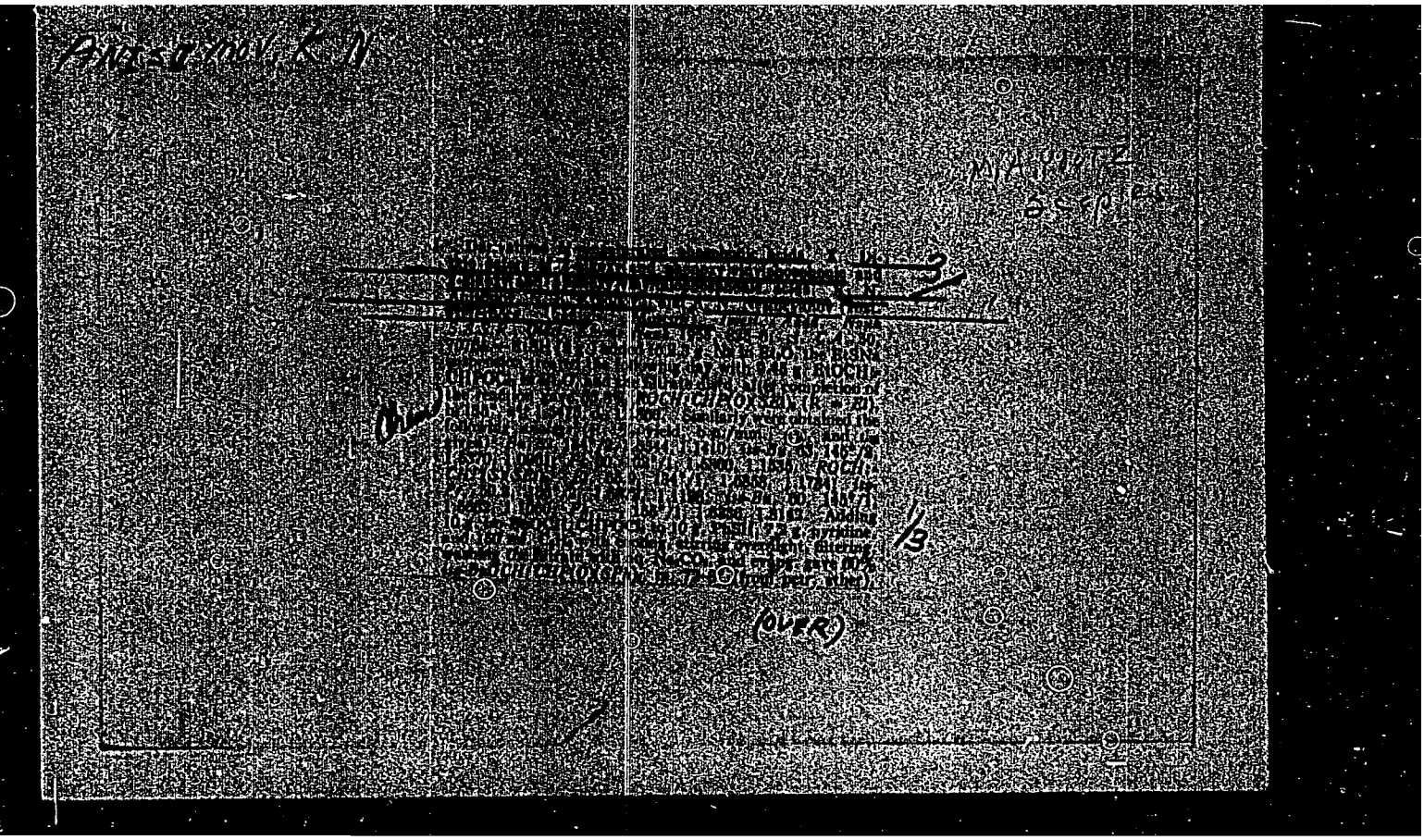
(Phosphinic acid)



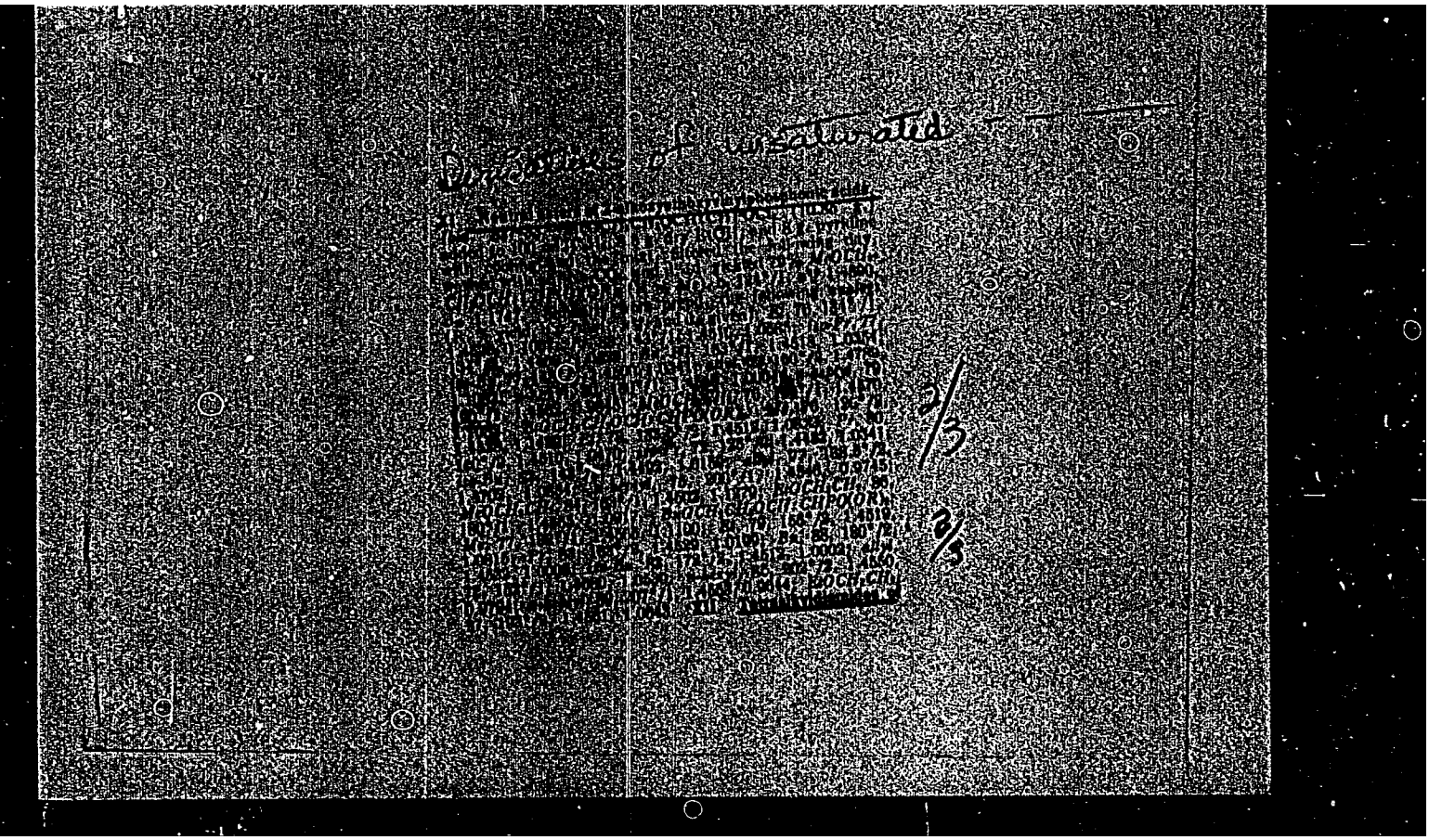
ANISIMOV, K.N.; KOLOBOVA, N.Ye.; NESMEYANOV, A.N.

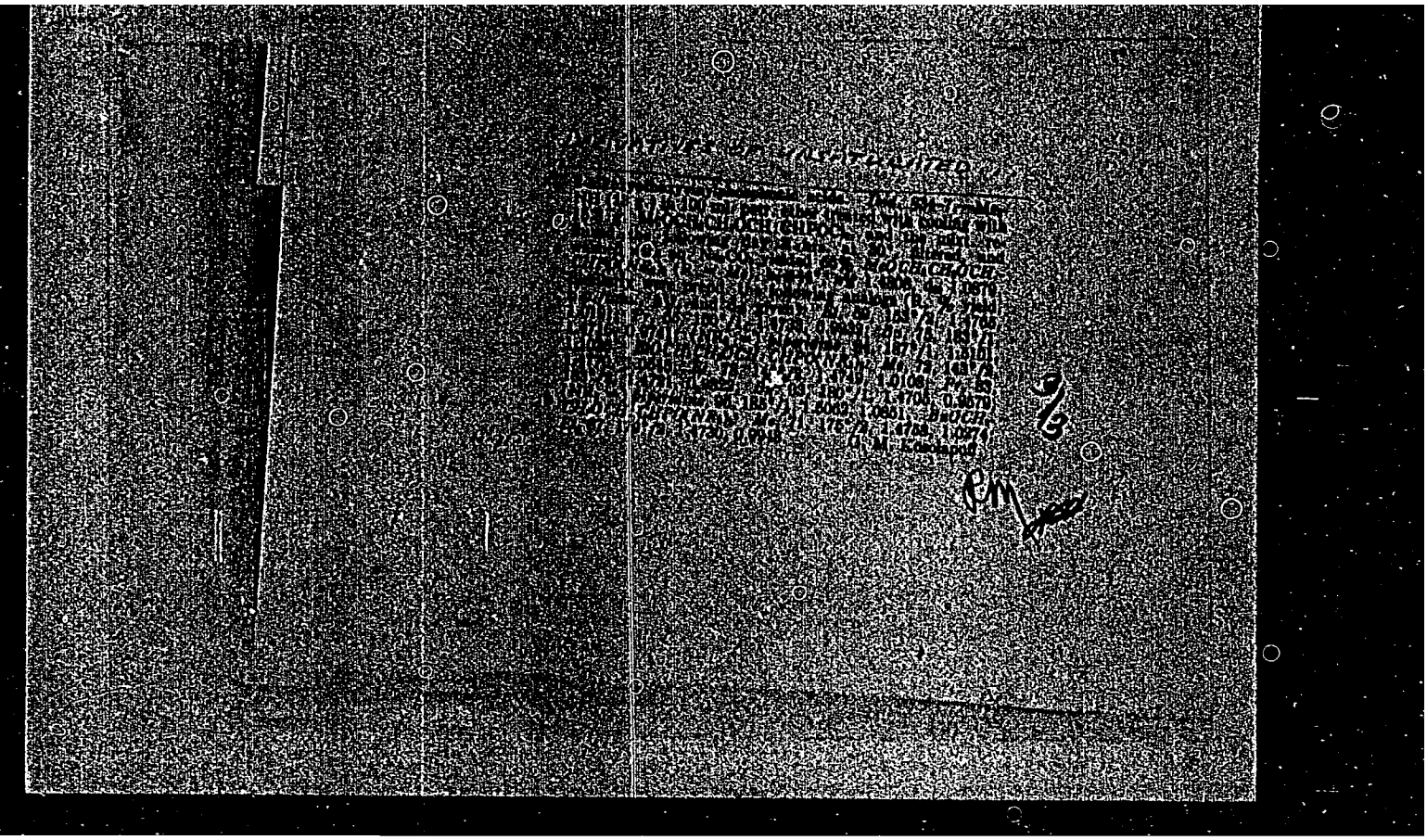
Research in the field of unsaturated phosphinic acids. Report no.9. Complete esters of β-alkoxy(phenoxy)vinylthiophosphinic acids. Izv.AN SSSR.Otd.khim.nauk no.4:669-671 Jl-Ag '55. (MLRA 9:1)

1.Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR.
(Phosphinic acids)



(OVER)





ANISIMOV, K.N.;KOLOBOVA, N.Ye; NESMEYANOV, A.N.

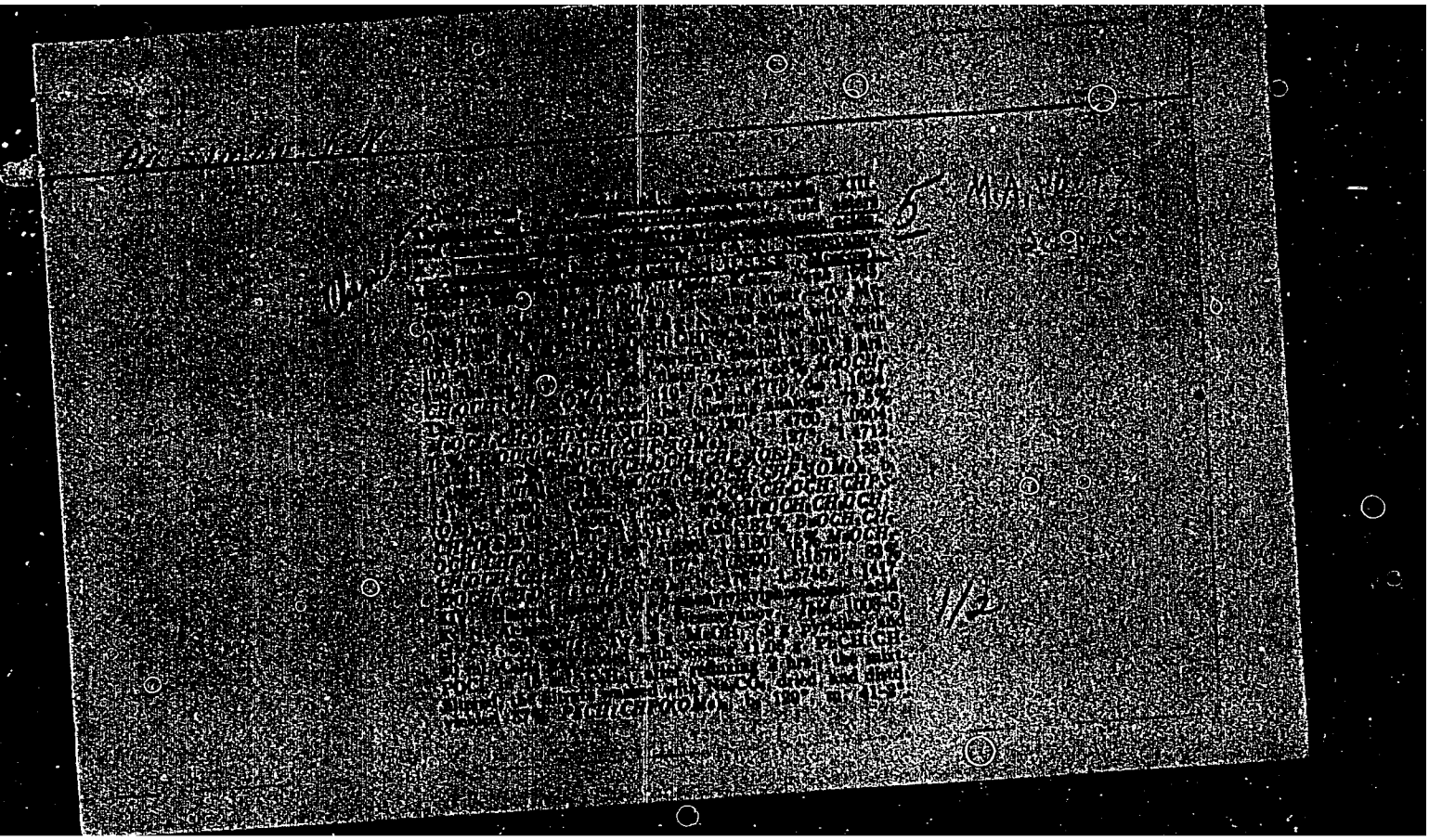
Investigation intc the unsaturated phosphinic acids. Part 11. The complete esters of β-alkoxyethoxyvinylphosphinic acids. Izv.AN SSSR.Otd.khim.nauk no.5:827-833 S-O '55. (MLRA 9:1)

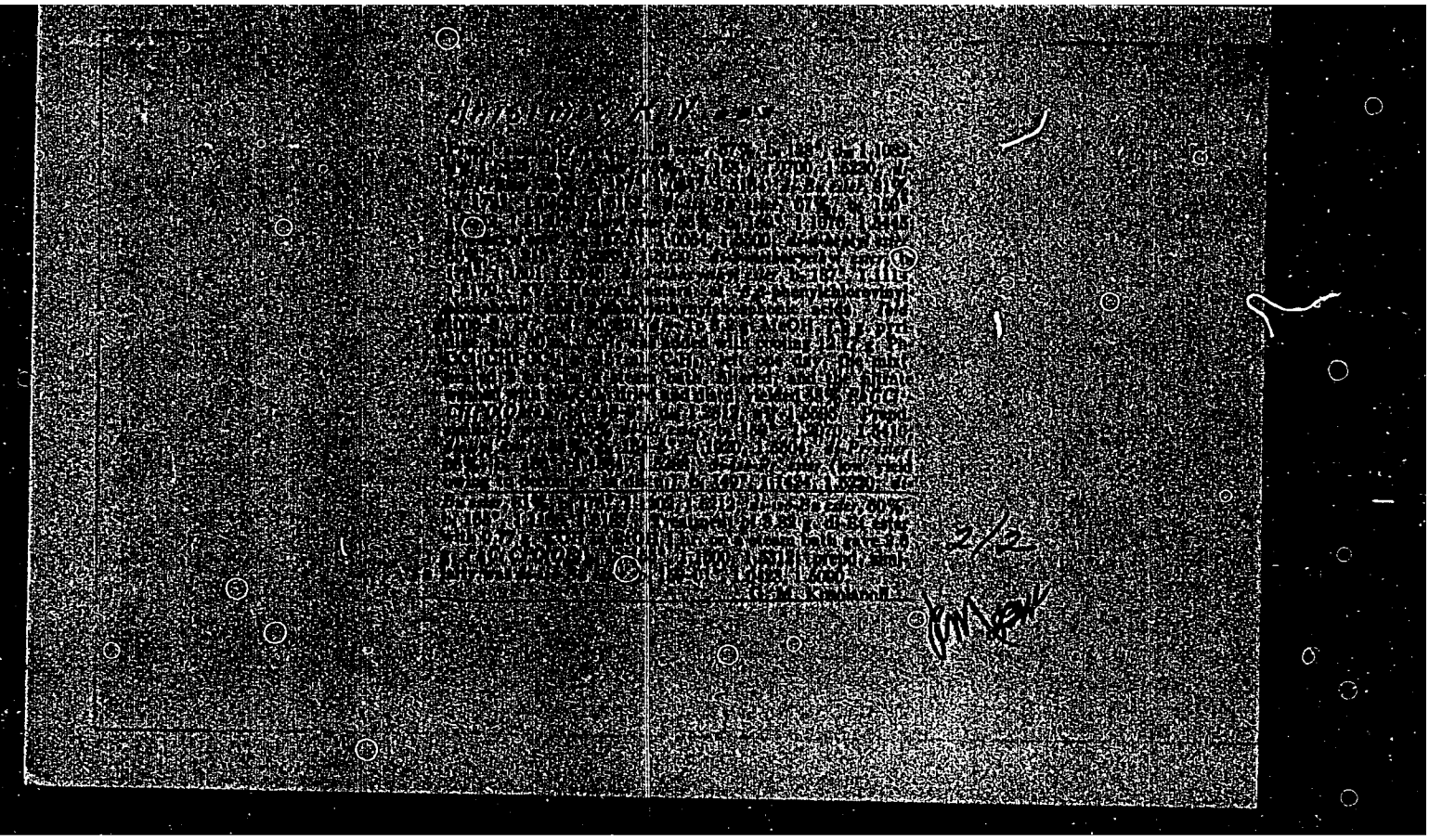
1.Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR. (Phosphinic acid)

ANISIMOV, K.N.; KOLOBOVA, N.Ye; NESMEYANOV, A.N.

Investigation into the unsaturated phosphinic acids. Part 12. The tetraalkyldiamides of the β-alkoxyethoxyvinylphosphinic acids. Izv.AN SSSR.Otd.khim.nauk no.5:834-837 S-O '55. (MLRA 9:1)

1. Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR.
(Phosphinic acid) (Amides)





ANISIMOV, K.N.; NESMEYANOV, A.N.

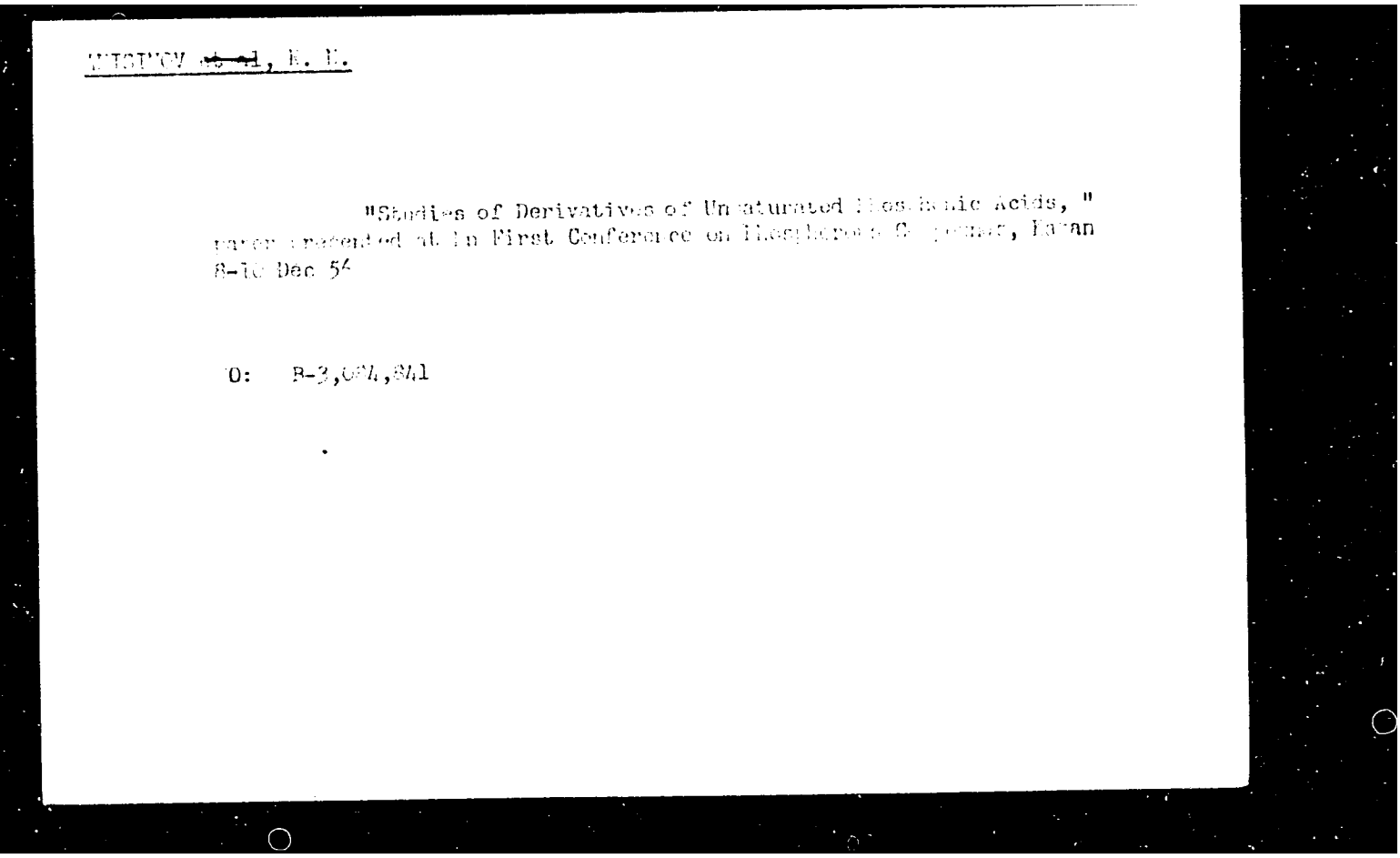
Investigation into the derivatives of unsaturated phosphonic acids. Part 14. The complete esters of β-phenylvinyl phosphonic acids. Izv.AN SSSR Otd.khim.nauk 86 no.6:1003-1005 My '55.

1.Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR. (Phosphonic acid)

ANISIMOV, K.N.; MESMEYANOV, A.N.

Investigation into the derivatives of unsaturated phosphonic acids. Part 15. The complete esters of β,β'-phenylchlorovinyl phosphonic and β-phenylacetylene phosphonic acids. Izv.AN SSSR Otd.khim.nauk 86 no.6:1006-1008 My '55. (MLRA 9:4)

1.Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR. (Phosphonic acid)



[illegible], E. I.

"Studies of Derivatives of Unsaturated [illegible] Acids," paper presented at 1st First Conference on Biochemistry, Japan 8-10 Dec 54

DO: B-3,084,341

ANISIMOV, K. N.

USSR/ Chemistry - Analytical chemistry

Card 1/1 Pub. 40 - 4/25

Authors : Anisimov, K. N., and Nesmeyanov, A. N.

Title : Study of unsaturated phosphinic acid derivatives. Part 16. Absolute esters of indenyl-2-phosphinic acid.

Periodical : Izv. AN SSSR. Otd. khim. nauk 1, 16-18, Jan 1956

Abstract : The derivation and the physico-chemical properties of five unsaturated esters of indenyl-2-phosphinic acids are described. Table of constants for the esters obtained is included. The esters were found to have high boiling points and are soluble only in organic solutions. Three USSR references (1955). Table.

Institution : Acad. of Sc., USSR, Inst. of Elementoorganic Compounds

Submitted : June 11, 1954

ANISIMOV, K. N.

USSR/ Chemistry - Analytical chemistry

Card 1/1 Pub. 40 - 5/25

Authors : Anisimov, K. N., and Nesmeyanov, A. N.

Title : Study of unsaturated phosphinic acid derivatives. Part 17. Derivatives of beta-phenylvinylphosphinic acid

Periodical : Izv. AN SSSR. Otd. khim. nauk 1, 19-22, Jan 1956

Abstract : The synthesis of five amides of beta-phenylvinylphosphinic acid, two esters of beta-phenylvinylthiophosphinic acid and two thio ethers of beta-phenylvinylphosphinic acid is described. The physico-chemical properties of the phosphinic acid derivatives are listed. One USSR reference (1955). Tables.

Institution : Acad. of Sc., USSR, Inst. of Elementoorganic Compounds

Submitted : June 11, 1954

ANISIMOV, K. N.

USSR/ Chemistry - Analytical chemistry

Card 1/1 Pub. 40 - 6/25

Authors : Anisimov, K. N.; Kolobova, N. Ye.; and Nesmeyanov, A. N.

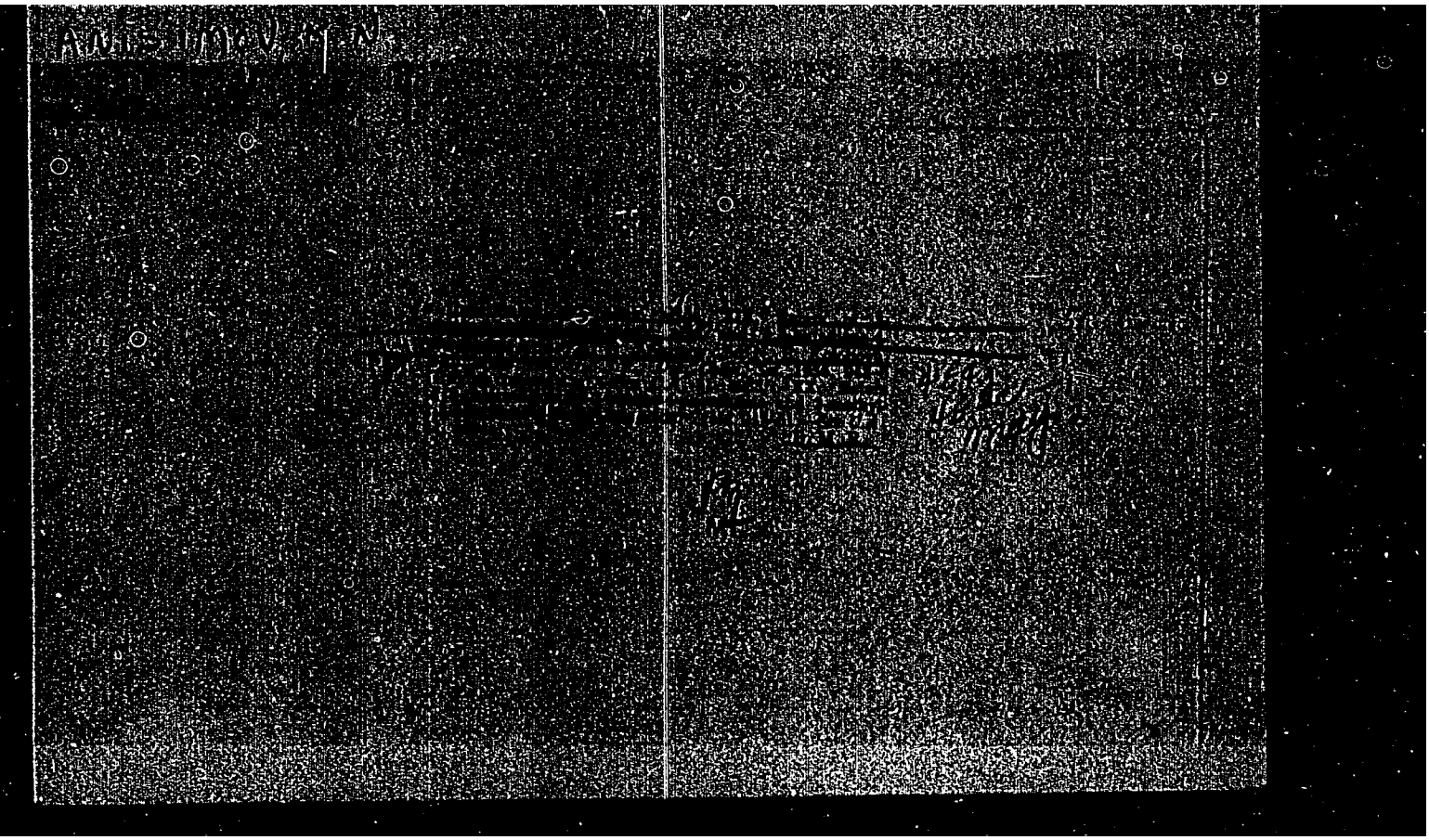
Title : Study of unsaturated phosphinic acid derivatives. Part 18. Alkylthiovinylphosphinic acid chlorides and their derivatives

Periodical : Izv. AN SSSR. Otd. khim. nauk 1, 23-26, Jan 1956

Abstract : The synthesis of acid chlorides of ethylthiovinylphosphinic, n-butylthiovinyl phosphinic, n-propyl, n-butyl, allyl, n-hexyl, beta-methoxyethyl, beta-ethoxyethyl esters of ethylthiovinylphosphinic acid, n-butyl, allyl and n-hexyl esters of n-butylthiovinylphosphinic acid as well as dipiperidide of ethylthiovinylphosphinic acid is described. The chem. formulas of the derivatives and their physico-chemical properties are given in tables. Three references: 1 USSR, 1 Pol. and 1 Germ. (1896-1954). Tables.

Institution : Acad. of Sc., USSR, Inst. of Elementoorganic Compounds

Submitted : October 14, 1954



ANISIMOV, K.N.; KOLOBOVA, N.Ye.

Research in the field of unsaturated phosphinic acids. Part 20. Esters of (3-chloro-2-methylbutene-2)-4-phosphinic and (2-methylbutadiene-2,3)-4-phosphinic acids. Izv.AN SSSR. Otd.khim.nauk no. 8:927-931 Ag '56. (MLRA 9:10)

1. Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR.
(Phosphinic acid)

ANISIMOV, K. N.; KOLOBOVA, N. Ye. (Inst. Elementary Organ. Compounds AS USSR)

"Research in the Field of Derivatives of Unsaturated Phosphinic Acids" (Issledovaniye v oblasti proizbodnykh nepredel'nykh fosfinovykh kislot)

Chemistry and Uses of Organophosphorous Compounds
(Khimiya i primeneniye fosfororganicheskikh soyedneniy),
Trudy of First Conference, 8-10 December 1955, Kazan,
Pp. Published by Kazan Affil. AS USSR, 1957
232-242

Report discussed by A. N. Pudovik (Chem. Inst. im. Acad. A. Ye. Arbuzov, Kazan Aff. AS USSR), G. V. Vinogradov (Inst. of Petroleum im. Acad. S. S. Nametkin AS USSR), B. A. Arbuzov (Chem. Inst. im. Acad. A. Ye. Arbuzov, Kazan Aff. AS USSR)

YAROSH, A.Ya.; ANSIMOV, K.N.; POLYAKOV, A.B.

Using gravitational prospecting for studying deep pyrite layers. Trudy Sver. gor. inst. no.30:55-63 '57. (MIRA 11:4)
(Ural Mountains--Pyrites) (Prospecting--Geophysical methods)

SOV/78-3-11-1/23

AUTHORS: Volkov, V. L., Mikheyev, Ye. P., Anisimov, K. N., Yeliseyeva, L. Ye., Valuyeva, Z. P.

TITLE: The Production of the Carbonyl Compounds of Molybdenum and Tungsten (Polucheniye karbonilov molibdena i vol'frama)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 11, pp 2433-2436 (USSR)

ABSTRACT: In the present paper the authors investigated the reaction velocity, the impurities, the time, as well as the temperature and the pressure of the reaction gases, and the nature of the solvents on the course of the synthesis and the yield of the carbonyl compounds of molybdenum and tungsten. The synthesis of molybdenum carbonyl lasted 2-3 hours, the synthesis of tungsten carbonyl 1-1,5 hours. Tungsten carbonyl is produced with a yield of 81-85% at a reaction temperature of 32-67°. The production of the carbonyl compounds of tungsten and molybdenum is usually carried out at 50 atmospheres absolute pressure. Experiments were carried out to produce molybdenum carbonyl under a pressure of 20-30 atmospheres excess CO-pressure. Zinc powder and aluminum powder were used as reducing agents. If

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The Production of the Carbonyl Compounds of Molybdenum and Tungsten

aluminum is used as reducing agent the yield of molybdenum carbonyl amounts to 0,6% at 18°C, 1,3% at 100°C, 9% at 150°C and 100 atmospheres excess pressure. If iron powder is used as reducing agent, the yield of molybdenum carbonyl amounts to 1,5% at 100°C. If zinc is used as reducing agent, the yield of molybdenum carbonyl is not higher than 6,6%. Mainly zinc powder is used as reducing agent for the production of tungsten carbonyl. The yield amounts to 85%. It was shown that for the production of carbonyl compounds ether in a quantity of not more than 2 g-mol to 1 g-mol metal chloride is necessary.
There are 2 tables and 3 references, 2 of which are Soviet.

SUBMITTED: October 2, 1957

Card 2/2

AUTHORS: Anisimov, K. N., Raysbaum, B. V. SOV/62-58-10-8/25

TITLE: Investigation in the Field of the Derivatives of Unsaturated Phosphinic Acids (Issledovaniya v oblasti proizvodnykh nepredel'nykh fosfinovykh kislot)
Communication 21: Esters and Amides of β-Isooctyl-Oxy-Vinyl Phosphinic Acid

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1958, Nr 10, pp 1208-1211 (USSR)

ABSTRACT: This paper is a part in the series of investigations of phosphinic acids and their derivatives produced on the basis of combination reactions of phosphorus pentachloride with unsaturated compounds. Acid chloride of the β-isooctyl-oxy-vinyl phosphinic acid was synthesized according to the method described already earlier (Ref 1) by the action of PCl_5 on vinyl-isooctyl ether. For synthesizing complete esters of the β-isooctyl-oxy-vinyl phosphinic acid by the interaction of acid chloride with alcohols in benzene medium the method by Milobendzki and Sachnowski (Ref 2) was employed. In the present paper the authors report on the synthesis of acid

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Investigation in the Field of the Derivatives of Unsaturated Phosphinic Acids. Communication 21: Esters and Amides of β-Isooctyl-Oxy-Vinyl Phosphinic Acid

SOV/62-58-10-8/25

chloride of the β-isooctyl-oxy-vinyl phosphinic acid, diethyl, dipropyl, dibutyl, diisobutyl, diisoamyl, dihexyl, diisooctyl, dimethoxy-ethyl ester of the β-isooctyl-oxy-vinyl phosphinic acid and tetramethyl diamide, tetraethyl diamide and piperidide of the β-isooctyl-oxy-vinyl phosphinic acid. The synthesis of tetramethyl diamide, tetraethyl diamide and dipiperidide of the β-isooctyl-oxy-vinyl phosphinic acid was carried out according to the method by Michaelis (Ref 3). There are 1 table and 4 references, 2 of which are Soviet.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elementary Organic Compounds, Academy of Sciences, USSR)

SUBMITTED: March 6, 1957

Card 2/2

SOV/80-59-1-29/44

AUTHORS: Papok, K.K., Anisimov, K.N., Zuseva, B.S. and Kolobova, N.Ye.

TITLE: Effect of Esters of Unsaturated Phosphinous Acids on the Antioxidation Properties of Mineral Oil (Vliyaniye efirov nepredel'nykh fosfinovykh kislot na antiokislitel'nyye svoystva mineral'nogo masla)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Nr 1, pp 180-186 (USSR)

ABSTRACT: Phosphorus-organic compounds improve the properties of lubricating oils. In the present paper the authors describe the effect of esters of unsaturated phosphinous acids on the antioxidizing properties of the MS-20 mineral oil. The evaluation of these properties was performed by the four methods: 1. thermal oxidizing stability, 2. volatility, 3. working fraction and 4. varnish formation (GOST 5797-53), and the results were compiled into tables. Their analysis leads to the following conclusions: 1. The antioxidizing properties of unsaturated phosphinous acid esters are improved: a. with the introduction of the phenyl group in diethyl, diallyl and dihexyl esters; b. with the presence of the indenyl group in diethyl and diallyl esters; c. with an increase in the length of the hydrocarbon radical (from C_2 to C_6) in diallyl and dihexyl esters; d. with an increase in the length of the chain of the ester grouping radical (from C_2 to C_6) in esters of the β-butoxivinyl-

Card 1/2

Effect of Esters of Unsaturated Phosphinous Acids on the Antioxidation Properties of Mineral Oil

phosphinous, β-phenylvinylphosphinous and β-hexyloxivinylphosphinous acids. 2. Among the compounds investigated dihexyl esters of unsaturated phosphinous acids possess the highest antioxidizing properties.
There are 5 tables and 2 references, 1 of which is Soviet and 1 American.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Elemental Organic Compounds of the AS USSR)

SUBMITTED: May 23, 1957

SOV/78-4-2-1/40

5(2)

AUTHORS: Nesmeyanov, A. N., Anisimov, K. N., Mikheyev, Ye. P., Volkov, V. L., Valuyeva, Z. P.

TITLE: Preparation of Tungsten Carbonyl by the Interaction of Iron Pentacarbonyl With Tungsten Hexachloride (Polucheniye karbonila vol'frama vzaimodeystviyem pentakarbonila zheleza s shestikhloristym vol'framom)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 2, pp 249-252 (USSR)

ABSTRACT: The interaction of tungsten-6-chloride with iron pentacarbonyl in an ethyl ether medium was investigated. The tests in the autoclave were carried out at the following molar ratios of the individual components: WCl_6 : $Fe(CO)_5$ = 1 : 2.25 and 1 : 3.25. The temperatures during the tests were: 70, 90, 110, 130, 150, 170 and 190°. At the molar ratio $Fe(CO)_5$: WCl_6 = 3.25 : 1 the yield of $W(CO)_6$ increases with temperature; it shows an increase of 29-31% at 20°, of 36-42% at 70°, and of 72-75% at 90°. The course of the reaction is shown in the

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Preparation of Tungsten Carbonyl by the Interaction of Iron Pentacarbonyl With Tungsten Hexachloride

following equation: $WCl_6 + 3Fe(CO)_5 \rightarrow W(CO)_6 + 3FeCl_2 + 9CO$.

The supply of hydrogen to the reaction mixture, after the conclusion of the reaction, increases the $W(CO)_6$ yield to 85%. This reaction corresponds to the following equation:

$$WCl_6 + 2Fe(CO)_5 + H_2 \rightarrow W(CO)_6 + 2FeCl_2 + 2HCl + 4CO.$$

The production of tungsten hexacarbonyl is described in detail. Results which are well reproducible are obtained by this method. There are 2 tables and 7 references, 3 of which are Soviet.

SUBMITTED: December 9, 1957

SOV/78-4-3-2/34

5(2)

AUTHORS: Nesmeyanov, A. N., Mikheyev, Ye. P., Anisimov, K. N., Volkov, V. L., Valuyeva, Z. P.

TITLE: The Synthesis of Molybdenum Carbonyl by Interaction Between Iron Pentacarbonyl and Molybdenum Pentachloride (Sintez karbonila molibdena vzaimodeystviyem pentakarbonila zheleza s pyatikhloristym molibdenom)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 3, pp 503-505 (USSR)

ABSTRACT: It has been found that molybdenum hexacarbonyl is formed in a maximum yield of 28.5% by the interaction between iron pentacarbonyl and molybdenum pentachloride in the presence of hydrogen chloride under a carbon monoxide pressure in an ether medium. Molybdenum hexacarbonyl is formed in a 15% yield at 175° in the presence of compressed hydrogen in an ethyl ether medium. Molybdenum carbonyl is formed in a yield of 23.4% at 175° when the reaction is performed in an autoclave with hydrogen (initial pressure 100 atmospheres) and carbon monoxide (initial pressure 50 atmospheres). There are 2 tables and 1 Soviet reference.

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5(2) SOV/78-4-8-19/43

AUTHORS: Nesmeyanov, A. N., Anisimov, K. N., Volkov, V. L., Fridenberg, A. E., Mikheyev, Ye. P., Medvedeva, A. V.

TITLE: The Synthesis of Chromium Hexacarbonyl by the Reaction of Chromium Trichloride With Lithium Aluminum Hydride and Carbon Oxide Under Pressure (Sintez geksakarbonila khroma vzaimodeystviyem trekhkhloristogo khroma s litiyalyuminiygidridom i okis'yu ugleroda pod davleniyem)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 8, pp 1827-1828 (USSR)

ABSTRACT: If the reaction mentioned in the title is carried out at a ratio of 1 mole $CrCl_3$: 3 mole $LiAlH_4$ in etheric solution at 65°C and a pressure of 100 at, $Cr(CO)_6$ is obtained in a 65% yield. The hitherto published data (Refs 1-6) show lower yields. A lower content of lithium aluminum hydride in the reaction mixture and lower temperatures strongly reduce the yields (Table 1). There are 1 table and 7 references, 3 of which are Soviet.

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5(2) SOV/78-4-9-3/44

AUTHORS: Nesmeyanov, A. N., Mikheyev, Ye. P., Anisimov, K. N., Filimonova, N. P.

TITLE: The Synthesis of the Chromium Hexacarbonyl With Participation of Metallic Reducing Agents

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 9, pp 1958-1960 (USSR)

ABSTRACT: Reference is made to the studies on $Cr(CO)_6$ described in publications (Refs 1-5, 7, 8). The difficulty encountered in synthesizing this substance lies in the high electrode potential of chromium trichloride, as this makes the use of strongly reducing metals necessary, which simultaneously give side reactions with the solvent . The only comparatively indifferent solvent was stated to be pyridine, which does not react with the alkali metals and forms complex compounds with $Cr(CO)_6$. $CrCl_3$ was dissolved in pyridine and reacted with CO under higher pressure after addition of zinc powder at 175° and yielded 10.8% $Cr(CO)_6$. The authors obtained a 35% yield of the same substance, by applying 50% excess magnesium activated by a crystal of iodine. Without activation by iodine the yield sank to 4%, as the magnesium did not react. An

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The Synthesis of the Chromium Hexacarbonyl With Participation of Metallic Reducing Agents

increase in the CO pressure to 220 atm also passivated the magnesium (only 1.7% yield). Appreciable yields were obtained with sodium (150% theoretical amount) at 20-25°. Raising the temperature to 50° lowered the yield. However, a rise in pressure to 220 atm increased the yield to 37%. The same yield was obtained by using lithium instead at a pressure of only 70 atm, but a further rise in the CO pressure had no effect on the yield. There are 9 references, 2 of which are Soviet.

SUBMITTED: May 28, 1958

PAPOK, K.K.; ANISIMOV, K.N.; ZUSEVA, B.S.; KOLOBOVA, N.Ye.

Effect of esters of unsaturated phosphinic acids on the antioxidizing properties of mineral oil. Zhur.prikl.khim. 32 no.1:180-186 Ja '59. (MIRA 12:4)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Mineral oils) (Phosphinic acid) (Oxidation)

SOV/80-32-2-22/56

AUTHORS: Papok, K.K., Anisimov, K.N., Zuseva, B.S., Kolobova, N.Ye.

TITLE: Effect of Tetraalkyldiamides and Dipiperidides of Unsaturated Phosphine Acids on the Antioxidation Properties of Mineral Oil (Vliyaniye tetraalkildiamidov i dipiperididov nepredel'nykh fosfinovykh kislot na antiokislitel'nyye svoystva mineral'nogo masla)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol XXXII, Nr 2, pp 358-363 (USSR)

ABSTRACT: The effect of diamides and dipiperidides of unsaturated phosphinic acids on the antioxidizing properties of the oil MS-20 is investigated here. The dipiperidide radical in the compounds increases their anticxidizing property. Phenyl and phenoxy groups increase the antioxidation properties only in tetraethyldiamides, but not in other compounds. The lengthening of the carbon radical in the group $(NR_2)_2$ from C_2 to C_4 reduces antioxidation in tetraethyldiamides and tetrabutyldiamides. Tetraalkyldiamides and piperidides of unsaturated phosphinic acids

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Effect of Tetraalkyldiamides and Dipiperidides of Unsaturated Phosphine Acids on the Antioxidation Properties of Mineral Oil

have higher antioxidizing properties than the esters of unsaturated phosphinic acids.
There are 4 tables and 1 Soviet reference.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Element-Organic Compounds of the USSR Academy of Sciences)

SUBMITTED: May 23, 1957

5(3) 307/80-32-3-33/43

AUTHORS: Papok, K.K., Anisimov, K.N., Luseva, L.S., Kolobova, A.Ye.

TITLE: The Effect of Thio-Compounds of Unsaturated Phosphinic Acids on the Anti-Oxidation Properties of Mineral Oil (O [illegible]niye tiosoyedineniy nepredel'nykh fosfinovykh kislot na [illegible]tiokislitel'nyye svoystva mineral'nogo masla)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol XXXII, Nr 3, pp 696-699 (USSR)

ABSTRACT: The effect of the dithioethyl ethers of unsaturated phosphinic and thiophosphinic acids and of the ethers of alkylthioalkylphosphinic acids on the antioxidation properties of the oil [illegible]S-20 is investigated here. The best result is obtained [illegible] the dithioethyl ether of the β-ethoxy, butenyl-phosphinic acid. The introduction of sulfur into the ethers of the phosphinic acids increases their antioxidation properties considerably. The ethers of alkylthioalkylphosphinic acids have an effect on the stability against thermal oxidation.

ANISIMOV, K.N. [Anisimov, K.N.]; FEDOROVA, G.K. [Federova, H.K.]

Reaction of phosphorus pentachloride and vinylacetylene. Dop.AN USSR no.9:1245-1250 '60. (MIRA 13:10)

1. Institut organicheskoy khimii AN USSR. Predstavleno akademikom AN USSR A.I.Kiprianovym.

(Phosphorus chlorides) (Butenyne)

ANISIMOV, K.N.; KUNITSKAYA, G.M.; SLOVOKHOTOVA, N.A.

Unsaturated phosphonic acids. Report No. 22: Addition of phosphorus pentachloride to isopropenylacetylene. Izv. AN SSSR. Otd. khim.nauk no. 1:64-71 Ja '61. (MIRA 14:2)

1. Institut elementoorganicheskikh soyedineniy AN SSSR i Fizikokhimicheskiy institut im. L.Ya. Karpova.
(Butenyne) (Phosphorus chloride)

S/062/61/000/001/006/016
B101/B220

AUTHORS: Slovokhotova, N. A., Anisimov, K. N., Kunitskaya, G. M., and Kolobova, N. Ye.

TITLE: Infra-red spectra of some derivatives of unsaturated phosphinic acids

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, no. 1, 1961, 71-76

TEXT: The purpose of the present paper was to verify the structural formulas of various previously (Ref.1) synthesized derivatives of unsaturated phosphinic acids based on their infra-red spectra, as well as to study the mutual influence of atoms and groups inside their molecules. The spectra were taken by means of a Hilger Д-209 (D-209) infra-red spectrometer. A table indicates those absorption bands from which conclusions were drawn as to the structure of the analyzed substances. In detail, the following has been found: The chlorine atom bound to the C-atom neighboring the C=C bond (ester II) increases the frequency of stretching vibrations of the C=C bond. The absorption bands 870-910 cm^{-1} correspond-

Card 1/3

ing to deformation vibrations of the CH group at the C=C bond confirm the existence of vinyl groups in IV and of vinylidene groups in I, II, III. The shift of these bands in II is also attributed to the neighboring chlorine atom. In relation to IV where the phosphorus group is not conjugated with the C=C group, frequency in V is reduced by 40 cm^{-1}. Since, however, the P=O group, due to its different configuration, cannot be located in the same plane as the C=C group, this effect is attributed to the phosphorus atom. In the esters VII to IX, a similarity with the spectra of pentadiene and isoprene was found in the range 1640-1585 cm^{-1}, which is attributed to the corresponding bands of symmetrical and antisymmetrical vibrations of the conjugate double bonds. The band shift is attributed to the neighboring phosphorus atom. All compounds show intensive bands in the range 1250-1270 cm^{-1}; these bands correspond to the P=O bond, and in the case of acid chlorides, they are shifted by 20 cm^{-1} toward higher frequencies, owing to the action of the chlorine atoms. The intensive doublet bands 1060-1000 cm^{-1} are attributed to vibrations of the O-C bond in the P-O-C groups. There are 3 figures, 1 table, and 10 references: 3 Soviet-bloc and 8 non-Soviet-bloc.

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Infra-red spectra of some derivatives... S/062/61/000/001/006/016
B101/B220

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physicochemical Institute imeni L. Ya. Karpov). Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental-organic Compounds, Academy of Sciences USSR)

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5.3630 2209, 1287, 1153

S/062/61/000/002/005/012
B115/B207

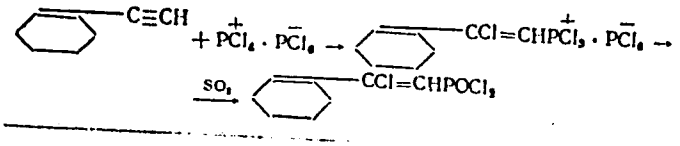
AUTHORS: Anisimov, K. N. and Kunitskaya, G. M.

TITLE: Study of unsaturated phosphonic acids. Report no. 23. Addition of phosphorus pentachloride to ethynyl cyclohexene-1

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, no. 2, 1961, 274-277

TEXT: In continuation of their studies of unsaturated phosphonic acids, the authors describe the addition of phosphorus pentachloride to ethynyl cyclohexene-1:

(1)



(1).

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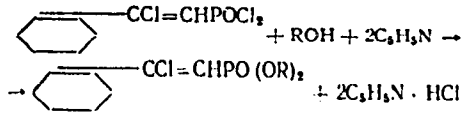
The acid chloride obtained reacts readily with alcohols:



(1)

(2).

In accordance with this reaction, the authors separated ethyl- and n-propyl esters of β,β'-cyclohexenyl chloro vinyl phosphonic acid (CCVP). The table shows the constants of the compounds obtained. The infrared spectra of the acid chloride and the esters of (CCVP) facilitated the study of the structure of these substances. In the range of the stretching vibrations of the C=C bond, two bands appear in the spectrum of these compounds: 1625, 1620 cm^{-1} and 1570, 1558 cm^{-1}, which confirms the existence of double bonds in the molecules of the conjugate system. The absorption bands 1275, 1260 cm^{-1} are stretching

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Study of unsaturated phosphonic ... S/062/61/000/002/005/012
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vibrations of the P=O bond (according to A. Ye. Arbuzov, M. I. Batuyev, and V. S. Vinogradova, Dokl. AN SSSR 54, 603 (1946)). In conclusion, the authors summarize as follows: 1) The acid chloride of (CCVP) was obtained. 2) Diethyl- and di-n-propyl esters of (CCVP) were synthesized. 3) The structure of the substances obtained was studied by means of infrared spectroscopy. There are 2 figures, 1 table, and 6 references: 3 Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental-organic Compounds of the Academy of Sciences USSR)

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5 3630 2209, 1287, 1153

AUTHORS: Anisimov, K. N. and Kopylova, B. V.

TITLE: Studies in the field of unsaturated phosphonic acid derivatives. Report no. 24. Interaction of phosphorus pentachloride with alkoxy acetylenes

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, no. 2, 1961, 277-280

TEXT: In the present paper, the authors report on the addition of phosphorus pentachloride to 5-phenoxy pentyne-1 and 5-ethoxy pentyne-1. After having treated the addition products with sulfur dioxide, the authors obtained the acid chloride of 2-chloro-5-phenoxy pentene-1-phosphonic acid (I), and of 2-chloro-5-ethoxy pentene-1-phosphonic acid (II), respectively

$$RO(CH_2)_3C \equiv CH + 2PCl_4^+PCl_6^- \longrightarrow RO(CH_2)_3CCl = CHPCl_3^+PCl_6^- \xrightarrow{SO_2}$$
$$\longrightarrow RO(CH_2)_3CCl = CHPOCl_2 + POCl_3 + SOCl_2.$$

Dimethyl-, diethyl-, and

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Studies in the field of unsaturated ...

dibutyl esters were obtained from (I) by the usual method. By hydrolyzing the acid chloride, the corresponding acid was obtained. From (II), the authors obtained the diethyl ester (boiling point 158-160°C at 3 mm Hg). V. N. Smorchkov recorded infrared spectra of diethyl- and dibutyl esters of 2-chloro-5-phenoxy pentene-1-phosphonic acid in I. V. Obreimov's laboratory. An absorption band in the range 1680-1620 cm^{-1} is characteristic of compounds containing an isolated double bond. In the case of $C_6H_5O(CH_2)_3CCl=CHPO(OR)_2$, the absorption band lies in the region of 1580 cm^{-1}. This shift is explained by the action of the chlorine atom at the double bond. The absorption band in the range 1250-1300 cm^{-1} is characteristic of the P=O group; it also holds for the two cases investigated. (I) is a white, crystalline, extremely hygroscopic substance readily soluble in benzene, less readily in petroleum ether, and insoluble in sulfur ether. 2-Chloro-5-phenoxy pentene-1 phosphonic acid (III) is a silvery-white, crystalline substance poorly soluble in water and

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easily in alcohol. The esters of this acid are thick, yellowish liquids soluble in organic solvents. Under the action of a calculated amount of KOH alcohol solution upon the dimethyl and diethyl ester of (III), corresponding esters of 5-phenoxy pentyne-1-phosphonic acid were obtained

$$C_6H_5O(CH_2)_3CCl=CHPO(OR)_2 \xrightarrow[C_2H_5OH]{KOH} C_6H_5O(CH_2)_3C\equiv CPO(OR)_2.$$

The authors failed to obtain these esters by interaction of (I) with alcohol and a calculated amount of triethylamine. The corresponding esters of (III) were thus obtained. Papers by M. F. Shostakovskiy and L. I. Antsus are mentioned. There are 2 figures, 2 tables, and 5 references: 4 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental-organic Compounds of the Academy of Sciences USSR)

SUBMITTED: August 4, 1959

NESMEYANOV, A.N.; ANISIMOV, K.N.; VALUYEVA, Z.P.

Preparation of ethylcyclopentadienyltricarbonylmanganese. Izv.AN SSSR.Otd.khim.nauk no.10:1780-1783 O '61. (MIRA 14:10)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Manganese)

ANISIMOV, K.N.; KOLOBOVA, N.Ye.

Chlorides of unsaturated acids. Izv.AN SSSR.Otd.khim.nauk no.3:442-443 Mr '62. (MIRA 15:3)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Phosphinous chloride)